

REMARKS

Claims 1-8 are pending in the present application.

Claims 9-20 are canceled without prejudice or disclaimer with this Amendment.

Applicants reserve the right to file a divisional application on the canceled claims.

In response to the Election/Restriction requirement under 35 U.S.C. §121, Applicants confirm electing Group I, claims 1-8 drawn to a composition, with traverse.

Although Applicants disagree with the Patent Office's restriction, to expedite allowance of present claims 1-8, Applicants cancel claims 9-20.

Claims 1, 3-4 and 7 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. patent application publication No. 2002/0000382 to Morrissey et al. Applicants respectfully traverse this rejection.

The present application and the application to Morrissey et al. were owned by the same person or subject to an obligation of assignment to the same person when the invention of the present application was invented. Morrissey et al. is assigned to Shipley Company, L.L.C. The present invention also is assigned to Shipley Company L.L.C. Enclosed is a copy of the filing receipt of the present application which shows that the present invention is owned by Shipley Company L.L.C. Accordingly, Morrissey et al. are not a proper reference for purposes of 35 U.S.C. §102(e). See 35 U.S.C. §103(c).

Applicants respectfully request withdrawal of rejection of claims 1, 3-4 and 7 under 35 U.S.C. §102(e) as allegedly anticipated by U.S. patent application publication No. 2002/0000382 to Morrissey et al.

Claims 1, 3 and 5-7 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. 6,444,140 to Schemenaur et al. in view of U.S. 4,256,602 to McLaughlin, Jr. Applicants respectfully traverse this rejection.

There would have been no reason or motivation for the person of skill in the art to include hydrofluoric acid and boric acid (fluoroborate complex) in the micro-etch formulation of Schemenaur et al. Schemenaur et al. teach micro-etching with molybdenum ions in combination with azole compounds (col. 2, lines 31-36). The micro-etching process which Schemenaur et al. desire to achieve is oxidative micro-etching where a metal surface such as copper is roughened

by oxidizing the metal (col. 1, lines 12-18 and lines 60-62, col. 2, lines 63-66, and col. 3, lines 12-25). Figure 2 of Schemenaur et al. show the type of roughened micro-etched surface they desire to achieve using molybdenum ions. Schemenaur et al. are not cleaning fines and liquid oils from aluminum as taught in McLaughlin, Jr.

McLaughlin, Jr. does not desire to micro-etch aluminum by oxidizing the metal as in Schemenaur et al. He uses the fluoroborate complex for a very different purpose. McLaughlin, Jr. removes and dissolves aluminum fines (small particles of aluminum deposited on the interior and exterior of containers during forming operations) and removes lubricating oils from aluminum surfaces (col. 1, lines 18-21, 28-30 and lines 59-68, col. 2, lines 19-23). He desires to clean the surface of aluminum with fluoroborate to remove contaminants which prevent further processing of the aluminum for use as containers. No where does McLaughlin, Jr. teach or suggest that fluoroborate complexes form a micro-etched metal where the metal is roughened due to oxidation of the metal as desired by Schemenaur et al.

Further, McLaughlin, Jr. does not desire to etch. He points out that fluoride in high concentrations can attack metal surfaces and etch the surface which is undesirable, especially when cleaning containers (col. 1, lines 50-53). His objective is to overcome this problem (col. 2, lines 55-56). He states that he addresses this problem by using low concentrations of fluoride (col. 2, lines 34-38 and lines 48-50).

Moreover, Schemenaur et al. and McLaughlin, Jr. are not analogous art. Each is directed to a different purpose using different chemical compositions. Schemenaur et al. use molybdenum ions in combination with azoles to micro-etch metal surfaces for printed circuit boards such as multi-layer printed circuit boards (col. 1, lines 4-5). They do not desire to clean a metal surface but roughen it as shown in Figure 2. In contrast, McLaughlin, Jr. use a fluoroborate complex to remove aluminum fines and liquid oils from aluminum surfaces during the manufacture of aluminum cans. McLaughlin, Jr. do not desire to micro-etch, but only clean the aluminum surfaces.

Accordingly, there would have been no reason or motivation for the person of skill in the art to include the fluoroborate complex of McLaughlin, Jr. in the formulation of Schemenaur et al. to micro-etch a metal. Nor would a person of skill in the art have had any reason or

motivation to consider combining Schemenaur et al. and McLaughlin, Jr. since they are non-analogous art.

Applicants respectfully request withdrawal of the rejection of claims 1, 3 and 5-7 under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. 6,444,140 to Schemenaur et al. in view of U.S. 4,256,602 to McLaughlin, Jr.

Claim 2 is rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. 6,444,140 to Schemenaur et al. in view of U.S. 4,256,602 to McLaughlin, Jr. as applied to claims 1, 3 and 5-7, and further in view of U.S. 3,137,600 to Margulies et al. Applicants respectfully traverse this rejection.

Claims 1, 3 and 5-7 are patentable over Schemenaur et al. in view of McLaughlin, Jr. for the reasons discussed above.

Margulies et al. do not make up for the deficiencies of Schemenaur et al. and McLaughlin, Jr. Margulies et al. do not teach or suggest the use of potassium monopersulfate in any type of formulation for any purpose. Margulies et al. specifically discourage the use of such compounds. They specifically say that potassium monopersulfate is largely ineffective in dissolving copper (col. 2, lines 47-52). Accordingly, a person of skill in the art would not have had any reason or motivation to include potassium monopersulfate in the formulation of Schemenaur et al. in view of Margulies et al.

Applicants respectfully request withdrawal of the rejection of claim 2 under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. 6,444,140 to Schemenaur et al. in view of U.S. 4,256,602 to McLaughlin, Jr. as applied to claims 1, 3 and 5-7, and further in view of U.S. 3,137,600 to Margulies et al.

Claim 8 is rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. 6,444,140 to Schemenaur et al. in view of U.S. 4,256,602 to McLaughlin, Jr. and U.S. 3,137,600 to Margulies et al. as applied to claim 2, and further in view of U.S. 5,669,980 to McNeil et al. Applicants respectfully traverse this rejection.

As discussed above, Schemenaur et al. and McLaughlin, Jr. are not properly combinable. Schemenaur et al. is directed to micro-etching using molybdenum ions and azole compounds to oxidize metals to form a roughened metal surface (col. 1, lines 12-18 and col. 2, lines 31-36). In contrast, McLaughlin, Jr. is directed to cleaning aluminum fines and liquid oils from the interior

and exterior of aluminum used in making containers using fluoroborate complexes (col. 1, lines 18-21 and lines 59-68, and col. 2, lines 19-23). Moreover, McLaughlin, Jr. uses low concentrations of fluoride to prevent undesired etching (col. 1, lines 50-57 and col. 2, lines 34-38 and lines 46-50). McLaughlin, Jr. is cleaning an aluminum surface, not micro-etching as Schemenaur et al. Each is directed to a different type of process and a different purpose. Accordingly, a person of skill in the art would not have had any reason or motivation to use fluoroborate complexes to micro-etch, i.e. oxidize, metal surfaces based on the teachings of McLaughlin, Jr.

Also, as discussed above, Margulies et al. do not teach or suggest using potassium monopersulfate for any reason. They only state that potassium monopersulfate is largely ineffective in dissolving copper (col. 2, lines 50-51). Accordingly, a person of skill in the art would not have had any reason or motivation to use potassium monopersulfate for any purpose based on the teachings of Margulies et al.

McNeil et al. do not make up for any of the deficiencies of Schemenaur et al., McLaughlin, Jr. and Margulies et al. McNeil et al. desire to clean aluminum by removal of silicon metals and oxides (col. 1, lines 6-10 and col. 2, lines 25-28). McNeil et al. use fluoride ions to remove silicon, metals and oxides from the surfaces of an aluminum-silicon alloy (col. 6, line 65 to col. 7, line 2). No where do McNeil et al. use fluoride to micro-etch as Schemenaur et al. do. Schemenaur et al. desire to form oxides on a metal surface (col. 2, lines 65-66, col. 3, lines 15-24 and Fig. 2), not remove oxides. McNeil et al. teach the opposite of what Schemenaur et al. teach. Accordingly, a person of skill in the art would not have had any reason or motivation to include hydrofluoric acid and fluoroboric acid in the Schemenaur et al. formulation based on the teachings of McNeil et al.

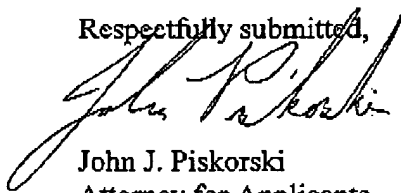
Applicants respectfully request withdrawal of the rejection of claim 8 under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. 6,444,140 to Schemenaur et al. in view of U.S. 4,256,602 to McLaughlin, Jr. and U.S. 3,137,600 to Margulies et al. as applied to claim 2, and further in view of U.S. 5,669,980 to McNeil et al.

Favorable consideration and allowance of claims 1-8 are earnestly solicited.

Should the Examiner have any questions concerning this response or this application, or should he believe this application is for any reason not yet in condition for allowance, he is

respectfully requested to telephone the undersigned at the number set forth below to expedite allowance of this application.

Respectfully submitted,



John J. Piskorski
Attorney for Applicants
Registration No. 35,647
Telephone No.: (508) 229-7662
Facsimile No.: (508) 229-0254

Rohm and Haas Electronic Materials LLC
455 Forest Street
Marlborough, MA 01752